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The bank at your side

Interest rate benchmark reforms and the new risk-free rates

July 2020

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Background Information

Information

- In 2014, the Financial Stability Board (FSB) published its report “Reforming major interest rate benchmarks”, which sets out a series of recommendations to strengthen existing benchmarks by underpinning them, to the greatest extent possible, with real transaction data and to develop alternative, nearly risk-free reference rates.
- IBORs (Interbank offered rates) play a central role in financial markets; they act as reference rates for a broad range of financial instruments and are therefore key to financial stability.
- Declining activity in the underlying markets and challenges to the sustainability of the panels contributing to these rates pose potentially serious risks to individual users of the rates and to the financial system more broadly.
- The alternative nearly risk-free rates (RFRs) selected as replacements or fallbacks to IBOR in various jurisdictions will be based on robust, liquid underlying markets.
- Global regulators and the public/private sector have established RFRs working groups to identify RFRs and plan their use, as appropriate.

What is the key difference between a Libor and RFR

Risk Free Rates (“RFRs“) – and the associated Adjusted Reference rates ARR - have been developed on a currency-by-currency basis. RFRs are fundamentally different from IBORs. This is because IBORs, representing an average of the rates at which Panel Banks believe that they could borrow money in the interbank market, reflect the credit and liquidity risk involved in lending in that interbank market. RFR are derived from real transactions, usually overnight on a secured or unsecured basis.

	IBOR	RFR and associated ARR
Tenor	"term" (1 week, 1 month, 3 months, 6 months, …)	Overnight
Pricing Horizon	"forward looking"	"backward looking"
Pricing Base	market quotes	real transactions
Pricing component	interest, liquidity and credit	mainly interest – no credit component
Pricing methodology	uniform across products and currencies	tbc – may differ across markets
Market liquidity	thin for longer terms	high (O/N)
Robustness	lower	higher
Governance	subject to reform	appropriate
Reflection of actual funding rates	not always ensured	deviates in times of crisis

What is the current RFR* / IBOR** Transition Status?

Reformed overnight rates introduced, term rates still under construction, several deadlines at end 2021

Overview of mayor indices

Currency	Current Status: RFR	Current Status: (L)IBOR	Timeline	Remarks / Open Questions
	› **€STR*** selected, publication started 02 Oct. 2019 @ 8:00 CET** › **First bonds and swaps introduced** › **Central Clearing: LCH (21 Oct.) Eurex (18 Nov)** › **CCP to shift to €STR flat discounting by 22 July 2020**	› Hybrid (Reformed) EURIBOR received the Benchmarks Regulation (BMR) approval on 2 Jul. 2019. › Panel bank individual implementation of the new methodology finished end Nov. 2019 › Panel banks have been asked to sign declarations of intent to continue their contributions..	› Transition from EONIA to €STR from 02 Oct. 2019 to 03 Jan. 2022 › EONIA now fixed as €STR + 8.5bps › No EONIA publication and EONIA discounting after 03 Jan. 2022 (non-CCP business) › Extension of grandfathering period for critical benchmark until 01. Jan. 2022 › Extension of the period of time that a competent supervisory authority can impose mandatory contributions to critical benchmarks from two to five years.	› Hybrid EURIBOR may be available beyond 2021. › As long as banks will contribute hybrid EURIBOR will continue, but relies on transactions and on expert judgement
	› **SOFR**** selected, publication started Apr. 2018** › **Futures available, swaps traded, issuance of SOFR linked securities, currently low liquidity**	› International Bar Association (IBA) survey showed a strong support for USD LIBOR (especially 3M). IBA seeking panel banks' engagement to support the different LIBORs until the end of 2021 (4Q19-1Q20) › In contrast, regulators (e.g. FCA, PRA) favour (L)IBOR replacement › Effective ramp up of the RFR › Term rate study	› End of LIBOR support by FCA on 31. Dec. 2021 › ISDA fallback language – fine tuning of parameters - intended implementation 2020	› Question whether banks are willing to contribute to LIBORs after 2021 for legacy contracts › Market participants have to lead transition from LIBORs to RFRs estimated term rates and term rates derived from such RFRs.
	› **SONIA***** selected, publication of reformed SONIA started Apr. 2018** › **Liquid market in swaps and futures**			

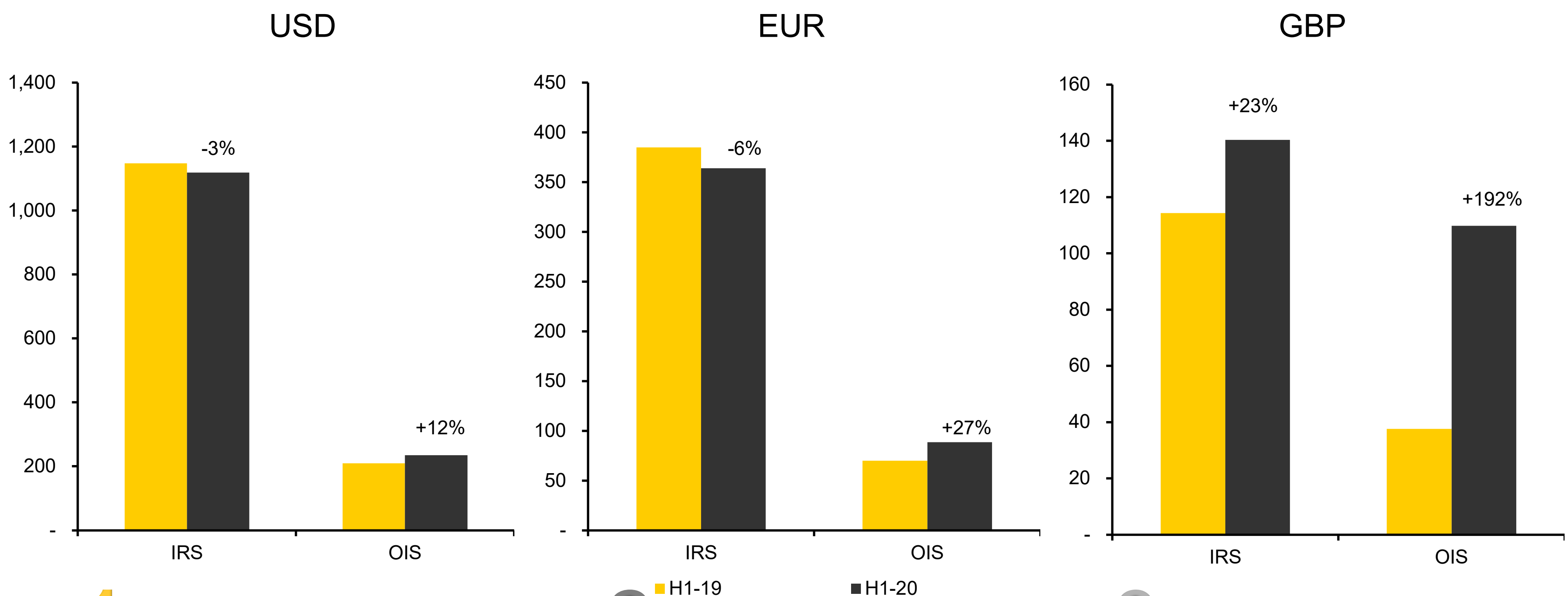
Main points

- Overnight rates introduced and published in all major countries, instruments based on the new indices develop with different speed in the various regions
- Critical date latest 31/12/2021: End of LIBOR support by FSA, EONIA discontinued, end grandfathering period for critical benchmarks
- Transition from LIBORs to RFRs related term rates not finally determined and still under discussion
- In Europe the so called Hybrid EURIBOR has received BMR approval – will continue to be used as term rate for the next years, as long as banks contribute and experts support the index

*** RFR: Risk Free Rate ** (L)IBOR: (London) Inter Bank Offered Rate *** €STR: € Short Term Rate**
****** SOFR: Secured Overnight Financing Rate ***** SONIA: Sterling Overnight Interbank Average Rate**

RFR slowly catching up with IBOR IRD products, GBP most advanced

IRS* and OIS** based derivative trades, maturity-weighted volumes, in trn local currency



1 Only a slow move to RFR in USD markets can be observed, as future standards are not yet established

2 No acute pressure to act to switch to RFRs in EUR markets as EURIBOR will remain.

3 Strong shift to RFS in GBP markets as new standards are known.

Source: Bloomberg SDRV, Commerzbank Research

* IRS: Interest Rate Swap ** OIS: Overnight Indexed Swap

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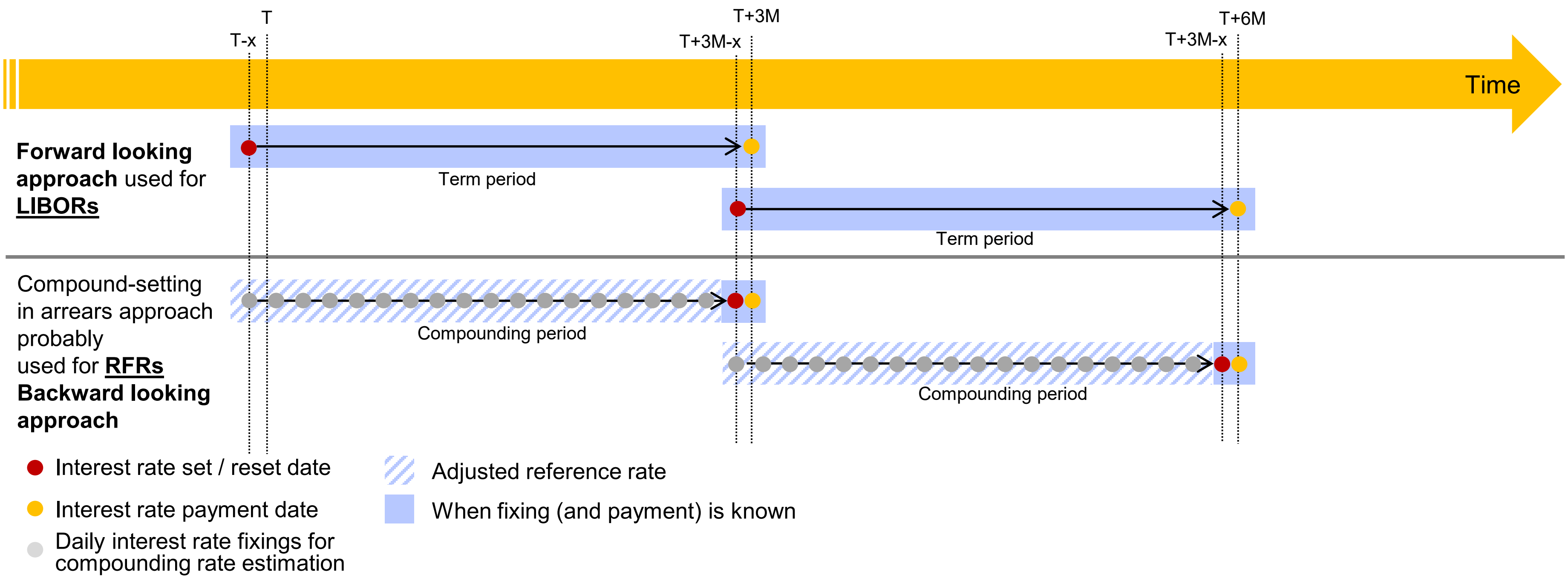
(Forward) IBOR Term Rates vs. (Backward) Compounded RFRs

Backward Compounded RFRs = Adjusted Reference Rate (ARR)



Considerations:

- IBOR based contracts are constructed using a forward looking fixing methodology – the term rate is fixed a few days before the new term period and is paid at the end of this period
- For RFRs different possibilities are under discussion – the most favourable one is the compound-setting in arrears method where the rate for a certain interest period is set e.g. 5 days before the end of such interest period and is based on daily fixings of the RFR during the compounding period which starts and ends e.g. 5 days prior to the start and end dates of the respective interest period

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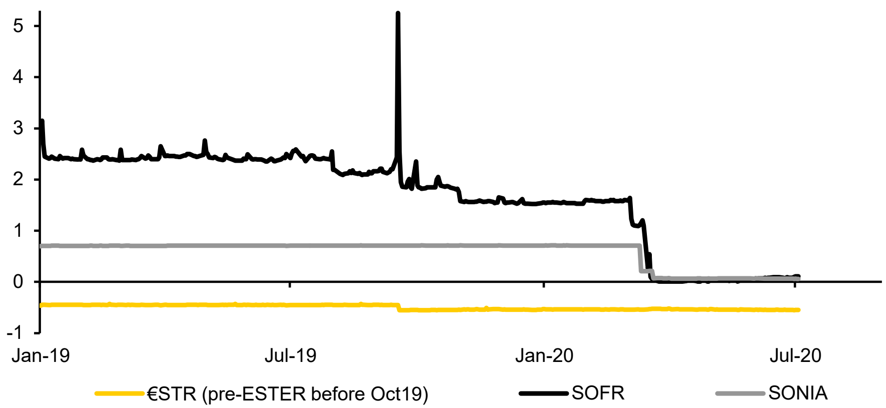
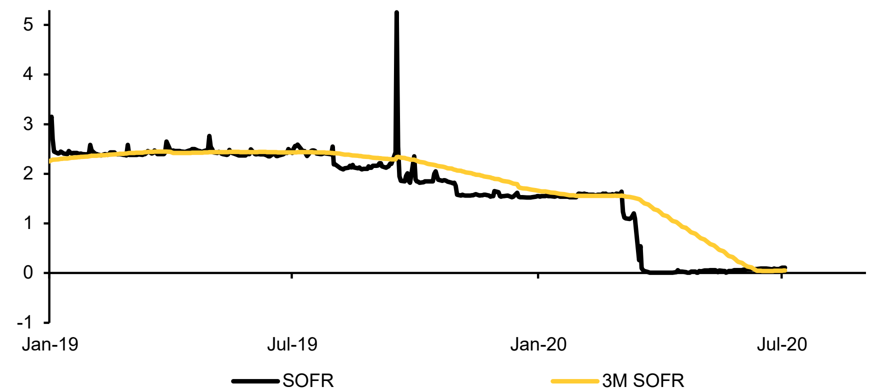
Volatility patterns differ for secured/unsecured rates and RFRs/LIBORS

Basis swaps which combine different rate types will be impacted

Evolution various overnight rates, in %



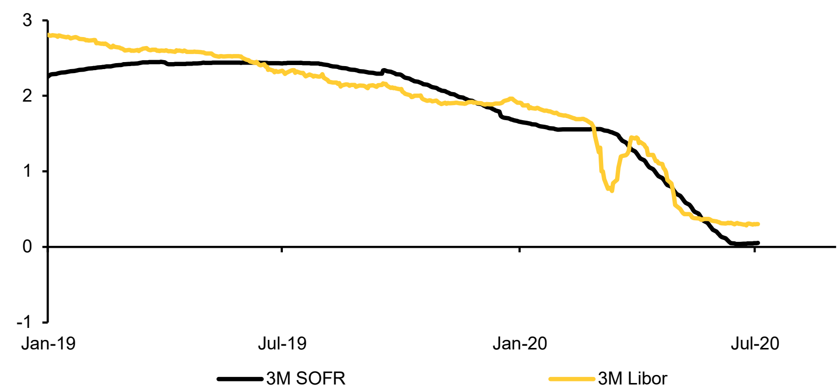
Evolution SOFR against 3M Compounded Average SOFR, in %



Considerations

- Overnight rates bear higher volatility compared to longer term rates
- Historically we have seen increased volatility levels in SOFR with very strong peaks in Q3 2019 (see top left chart)
- Volatility can be reduced significantly by using compounded rates (see top right chart for SOFR)
- Compounding can even reduce volatility to a level below LIBOR rate volatility (see bottom right chart)
- **However, when combining different currencies via cross currency swaps, the involved basis swap spreads will be impacted by the different methodologies used in the underlying reference indices**

Evolution 3M Compounded Average SOFR against 3M-$-LIBOR, in %



Source: Bloomberg, Commerzbank Research. Past performance is not indicative of future performance.

Impact for our clients and their treasury departments

Changes will first affect instruments, but with consequences for many areas within your company

Instruments directly impacted	Instruments indirectly impacted
Instruments that directly refer to non-BMR compliant indices and that will need changes in terms and/or contractual foundation (e.g. derivatives, FRNs or loans)	Instruments that use non-BMR compliant indices for discounting purposes, collateralisation and/or FX forward calculations

Impacted Areas

1. Legal documentation
2. Risk and liquidity management
3. Bond issues linked to floating rate indices
4. IT Infrastructure and client processes
5. Communication

Recommended action plan for our clients

The new RFR world will come, be prepared to avoid nasty surprises…

1 Legal documentation

- loans, securities, etc.) to find out which ones are impacted.
- Prepare an inventory of impacted agreements
- Look for specific agreements regarding introduction of new benchmarks – do fall back clauses exist? If not, is an amendment necessary or advisable?
- Investigate the upcoming ISDA, DRV and LMA benchmark supplements and protocols – take a decision whether to adhere or not

2 Risk and liquidity management

- Go through contracts to find out which ones mature after 2021.
- Estimate potential value transfer
- Be aware of timelines , changes to margining and discounting by clearing houses
- Also be aware of the changes due to combination of various philosophies – the homogeneous (L)IBOR world may be substituted by a combination of EURIBOR and RFR based term rates – this will impact basis swap spreads and volatilities between these indices
- Review whether hedge accounting is impacted and still applicable for the future
- Decide when to start trading new indices or which (L)IBOR instruments should be retained until cessation

3 Issues with bonds

- Go through terms and conditions to find out which ones mature after 2021.
- Estimate potential value transfer
- Prepare an inventory of impacted agreements
- Be aware of timelines, changes to margining and discounting by clearing houses
- Decide when to start trading new indices or which (L)IBOR instruments should be retained until cessation

4 IT infrastructure and processes

- Analyse systems, operations and business processes regarding impact of changes in fixing date and time – setup change management plan
- Analyse system whether they can manage new indices – contact system vendor to find out and to ask for updates if necessary
- Analyse the complete front-to-back process to understand impact of changes
- Follow product approval process for new RFR products

5 Communication

- Inform all departments about necessary changes
- Setup a company wide „New RFRs office“ to centralise internal and external communication
- Build-up network with working groups and consultants to receive latest infos
- Teach staff in terms of upcoming changes

Commerzbank will be the bank at your side for the benchmark transition and provide support to you on products you trade with us. We will keep you informed on updates regarding the benchmark transitions. If you have any questions, please send an email to IBOR_Transition_London@commerzbank.com.

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